

C1 described in commonly-owned copending patent applications having serial numbers: 08/324,124 ("Cache Memory"), 08/324,127 ("Redundant Mapping Tables"), 08/324,128 ("Memory Translation"), 08/324,129 ("Address Queue") and 08/404,625, filed March 14, 1995, entitled "Address Queue", which are hereby incorporated by reference in their entirety for all purposes.

IN THE CLAIMS:

Sub D1
C2
1 20. (Presently Amended) A method comprising:
2 issuing an instruction, wherein said instruction includes a hint field, a base
3 field and an offset field;
4 forming an address to access data in a cache, wherein said address is
5 formed by using information contained in said offset and base fields; and
6 prefetching said data, when unavailable in said cache, in accordance with
7 hint information contained in said hint field, wherein said hint information indicates an
8 expected use of said data and a destination for said data.

1 21. The method of claim 20 wherein said address is a virtual address.

1 22. The method of claim 20 wherein said hint information indicates
2 said data is expected to be not reused extensively and directs said data to a certain way
3 destination in said cache.

1 23. The method of claim 20 wherein said hint information indicates
2 said data is expected to be reused extensively and directs said data to a certain way
3 destination in said cache.

1 24. The method of claim 20 wherein said hint information directs said
2 data to (a) a first way destination when said data is expected to be not reused extensively,
3 and (b) a second way destination when said data is expected to be reused extensively.

1 25. The method of claim 20 wherein said hint information directs said
2 data to (a) a first way destination when said data is expected to be loaded but not reused
3 extensively or said data is expected to be stored or modified but not reused extensively,
4 and (b) a second way destination when said data is expected to be loaded and reused
5 extensively or said data is expected to be stored or modified and reused extensively.

Sub
D1
C3
1 26. (Presently Amended) A method comprising:
2 issuing an instruction, wherein said instruction includes a hint field, a base
3 field and an index field;
4 forming an address to access data in a cache, wherein said address is
5 formed by using information contained in said index and base fields; and
6 prefetching said data, when unavailable in said cache, in accordance with
7 hint information contained in said hint field, wherein said hint information indicates an
8 expected use of said data and a destination for said data.

1 27. The method of claim 26 wherein said address is a virtual address.

1 28. The method of claim 26 wherein said hint information indicates
2 said data is expected to be not reused extensively and directs said data to a certain way
3 destination in said cache.

1 29. The method of claim 26 wherein said hint information indicates
2 said data is expected to be reused extensively and directs said data to a certain way
3 destination in said cache.

1 30. The method of claim 26 wherein said hint information directs said
2 data to (a) a first way destination when said data is expected to be not reused extensively,
3 and (b) a second way destination when said data is expected to be reused extensively.